

# Irene Ni

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## Skills

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**Programming Languages** Python, Javascript, C++, C#, HTML5, CSS3

**Tools + Frameworks** ReactJS, NodeJS, React Native, Pandas, NoSQL, Git, SolidWorks CAD, Matlab

**Design + Graphics** Figma, Adobe XD, Photoshop, Illustrator, Premiere Pro

## Experience

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### Engineering Design Research Assistant

University of Waterloo

Waterloo, ON  
May 2021 - Aug 2021

- Investigated how to improve student design cognition through technology supports under Professor Ada Hurst
- Spearheaded product and visual design for a web app that tracks students' design process when solving open-ended problems
- Leveraged web scraping methods in **Python** to extract **300+** engineering program descriptions from university websites
- Built an NLP Pipeline using **Natural Language Toolkit** and **Pandas** to analyze top n-grams in engineering recruitment materials

### Better Lives App Developer

Ideasinc

Toronto, ON  
Apr 2021 - Current

- Android app connecting Toronto's homeless population with e-Donations, shelters, and community services
- Translated abstract research from outreach workers to a **user-centred design** that balanced the needs of citizens, community providers, and homeless
- Led the delivery of **Adobe Xd** prototypes to key stakeholders including the City of Toronto and TD Bank

### Summer Student Intern

Big Brothers Big Sisters of Halton

Oakville, ON  
Jul 2020 - Sep 2020

- Secured **10+ new donors** for charity auctions through personal outreach
- Assisted in **SharePoint** migration from on-premise to online and implemented workflows for client registration and monitoring
- Provided mentorship to at-risk youth, helping them build confidence and interpersonal skills

## Projects

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### Recipro App | React Native + JS

TU20 Cup

Remote  
Feb 2021

- Community-building app fostering reciprocal acts of kindness between neighbors
- Reduced development time by taking ownership of both product design in **Figma** and implementation of user interfaces in **Javascript + React Native**
- Implemented **Cloud Firestore** back-end to manage user data, task requests and social features

### Scalefy Wheelchair Scale

Intro to Biomedical Design

Waterloo, ON  
Sep 2020 - Dec 2020

- Designed a wheelchair compatible home-use scale for spinal injury patients at **1/5 market price**
- Organized deliverables to ensure project completion in four months
- Deployed QFD, engineering force analysis, and technical drawings as part of an iterative design process

### Stem Cell Society Executive

Student Society for Stem Cell Research

Oakville, ON  
Sep 2018 - Jan 2020

- Organized speaker series for **50+** general members inviting UPenn professors to discuss their work in regenerative medicine
- Coached 4 teams to UofT stem cell case competition with **3 reaching top 10**, instructing them in scientific writing and prepping them for technical interviews

## Education

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### University of Waterloo

BASc Biomedical Engineering

Waterloo, ON  
Sep 2020 - Apr 2025 (Expected)

- Relevant Courses: Data Structures & Algorithms (**C++**), Digital Computation (**C#**)
- **Related Awards:** NSERC Undergraduate Student Research Award (\$6,000), President's Scholarship of Distinction (\$2,000), 1st Place Waterloo Engineering Competition, 3rd Place University of Waterloo Sandford Fleming Debate
- Extracurriculars: BioMechatronics Club, UW Quizbowl